

Fraser of Allander economic commentary

January 2011

Special Edition: Energy and Pollution

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The Fraser of Allander Institute was established in 1975 as a result of a donation from the Hugh Fraser Foundation. We gratefully acknowledge the contribution of the Buchanan and Ewing Bequest towards the publication costs of the Commentary.

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This is the first in a series of 'Special Issues' which will gather together a number of current and policy related papers on a particular theme. This first collection of papers draws together research from across the UK on the themes and implications of energy and climate change. As the guest editors note, we hope this collection stimulates discussion amongst the business and policy making communities in Scotland.

Cliff Lockyer
Managing Editor,
Fraser of Allander Economic Commentary
January 2011

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Foreword

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Climate change, emissions reduction, renewable energy, energy efficiency and fuel poverty: subjects that are both very topical and very emotive across the globe and at all levels in society.

At the tail end of 2010 we had the United Nations Climate Change Conference in Mexico, the UK government announcing its proposals for electricity market reform (many of which are focused on providing the incentives to invest in nuclear and renewable energy) and in Scotland, one of the coldest and snowiest starts to a winter ever, with the country almost brought to a standstill and rumours of potential shortages of heating oil.

Against this backdrop, the Scottish Government has set out a bold vision. The Climate Change (Scotland) Act sets world leading targets for emission reductions by 2020 - at levels greater than those set by the UK government or the EU. Targets have also been set for electricity generation- 80% of our energy consumption should come from renewable sources by 2020. Renewable energy has been identified as a platform for major economic growth, through capital investment, the export of power and the export of know how.

Is this vision achievable?

Scotland has significant natural resource in the form of wind and marine power, and a long history of engineering expertise. We have industry leaders in the development of renewable power generation in SSE and Scottish Power Renewables, and in wave power technology development with companies such as Pelamis Wave Power and Aquamarine Wave Power.

Scotland's oil & gas industry has many years of experience operating in the harsh North Sea environment that will be important to the development of offshore wind power. The Scottish Government has supported this vision in recent months with the launch of the £70m National Renewables Infrastructure Fund.

At this high level, the signs are certainly positive. Start to peel back the layers however, and the complexity of this subject, with its interplay of political, economic and moral factors becomes evident.

Much of the work that PwC is currently doing in the sector is on how to attract the investment that will ensure the build

out of renewable generation and in particular offshore wind. But there are many other issues to be explored.

- How should emissions be measured - based on production within our geographic borders or on the generation required to support Scotland's consumption regardless of origin?
- How can a Scottish climate change policy succeed in an economy and electricity market which is embedded in the UK and EU markets?
- What independent levers does the Scottish Government have in achieving the targets they have set?
- What part might our communities play in emissions reduction and energy efficiency?
- Does the "rebound effect" mean that planned energy efficiency savings will only be partially realised due to our propensity to consume?
- To what extent is the consumer prepared to pay for a future where power generation is "greener", and what are their preferences in choosing between alternative impacts?
- What might Scotland's future generation capacity look like - embedded as it is within a UK market that will require a balance across coal, gas, nuclear, wind, marine and hydro to provide for a secure and sustainable supply of power?

Published by the Fraser of Allander Institute in partnership with PwC, the following papers discuss these questions and are each thought provoking in their own way.

They will help us understand just some of the complexities that will need to be addressed in achieving the targets and ambitions that have been set out for Scotland's future as a leader in the world of climate change.